REMARKS/ARGUMENTS

The Examiner rejected Claims 1-23 under 35 USC 103(a) as being unpatentable over Varma et al. (U.S. 5,859,835)(Hereinafter Varma) in view of Dulin et al. (U.S. 2002/0055356)(Hereinafter Dulin) in further view of Lahat et al. (U.S. 6,643,612)(Hereinafter Lahat). Applicants respectfully traverse this rejection for at least the reasons stated below.

As stated in MPEP § 2143.01, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Applicants respectfully submit, as will be detailed below, that Varma, Dulin, or Lahat do not, either expressly or inherently, teach or suggest the various limitations recited in the pending claims.

For example, claim 1 discloses:

> 1. (original) A bandwidth provisioning method comprising the steps of:
>
> (a) appending an inter-switching device label comprising a timestamp to a protocol data unit (PDU) segment at a first switching device, the first switching device comprising a plurality of queues characterized by one or more quality of service (QoS) properties;
>
> (b) buffering the PDU segment in one of the plurality of queues;
>
> (c) conveying the PDU segment to a second switching device;
>
> (i) determining, using the timestamp, an observed delay for the PDU segment to propagate between the first switching device and the second switching device; and
>
> (ii) altering at least one of the one or more QoS properties from the second switching device depending on the observed delay.

Applicant does not believe that Dulin discloses altering at least one of the one or more QoS properties from the second switching device depending on the observed delay. *For example*, at least in paragraphs [0103 and 0158]:

[0103 and 0158] A fourth step 1045 includes the subscriber unit sending ranging information. The ranging information is sent for estimating the propagation delay between the subscriber unit and the base transceiver station. The estimated delay is used for ensuring that transmit timing of the subscriber unit is adjusted to compensate for the propagation delay. [0158] It is to be understood that ***the number of frequency blocks allocated per time slot is variable.*** An embodiment of the scheduler includes ***the scheduler taking into consideration constraints on the frequency bandwidth on either the up link or the down link transmission. The frequency bandwidth allocations can be adjusted by varying the number of frequency blocks within a time slot.*** The frequency bandwidth allocated to a subscriber can be limited due to signal to noise issues, or the Federal Communication Committee (FCC) limitations. The scheduler can account for these limitations though allocations of frequency bandwidth through the scheduling.

Dulin states that "***The frequency bandwidth allocations can be adjusted by varying the number of frequency blocks within a time slot.*** The frequency bandwidth allocated to a subscriber can be limited due to signal to noise issues, or the Federal Communication Committee (FCC) limitations. The scheduler can account for these limitations though allocations of frequency bandwidth through the scheduling." This is not Applicant's invention. Applicant's invention is based on one or more QoS levels, defined by one or more policies governing the transmission of PDUs through the node. This claim element makes the claim patentable distinct under 37 CFR 1.111(b) and, therefore allowable.

A prior art reference must be considered in its entirety, i.e., as a whole, ***including portions that would lead away from the claimed invention.*** W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (Claims were directed to a process of producing a porous article by expanding shaped, unsintered, highly crystalline poly(tetrafluoroethylene) (PTFE) by stretching said PTFE at a 10% per second rate to more than five times the original length. The prior art teachings with regard to unsintered PTFE indicated the material does not respond to conventional plastics processing, and the material should be stretched slowly. A reference teaching rapid stretching of conventional plastic polypropylene with reduced crystallinity combined with a reference teaching stretching unsintered PTFE would not suggest rapid stretching of highly crystalline PTFE, in light of the disclosures in the art that teach away from the invention, i.e., that the conventional polypropylene should have reduced crystallinity before stretching, and that PTFE should be stretched slowly.).

In the instant case, we conclude that a person of ordinary skill in the art having common sense at the time of the invention would not have reasonably looked to ________ to solve a problem already solved by Applicant." Ex Parte Rinkevich et al, Appeal 20071317, decided May 29, 2007. ***Distilling an invention down to the "gist" or "thrust" of an invention disregards the requirement of analyzing the subject matter "as a whole."*** W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (Emphasis added).

However, purely in the interest of expediting the prosecution of the instant invention, Applicant has amended claims 1, 18, 23, 24, and 25 so as to include substantially the following limitations:

> A bandwidth provisioning method based on one or more quality of service levels (QoS), defined by one or more policies governing the transmission of protocol data units through a plurality of switching devices comprising the steps of:
> (a) appending an inter-switching device label comprising a timestamp to ~~a~~ the protocol data unit (PDU) segment at a first switching device, the first switching device comprising a plurality of queues characterized by one or more ~~quality of service (~~QoS~~)~~ properties;
> (b) buffering the PDU segment in one of the plurality of queues;
> (c) conveying the PDU segment to a second switching device;
> (d) determining via a fragmentation module to parse the PDU into fragments based on priority queues associated with a different level of priority with a unique QoS, wherein a plurality of QoS policies are applied, the plurality of QoS policies including bandwidth requirements, maximum jitter, queue delay, transit delay, preference and frequency with which a packet is distributed to the switch fabric;
> (i) determining, using the timestamp, an observed delay for the PDU segment to propagate between the first switching device and the second switching device; and
> (ii) altering at least one of the one or more QoS properties from the second switching device depending on the observed delay.

Support for such limitations can be found at least on pages 5 – 17 of the instant invention. Neither Varma, Dulin and Lahat, nor any of the cited art teach or suggest such limitations. Applicant has reviewed the references in full, as discussed above, and the above-mentioned limitations as set forth are clearly absent from the references regardless of how they are construed.

All of the above-mentioned prior art does not pertain to fragmenting, prioritizing, time stamping, among others in order to prioritize along with a quality of standard goal to provision and allocate bandwidth.

In fact, the Abstract of Varma states "A traffic scheduling system and method for packet-switched communications networks where multiple sessions share an outgoing communications link. Prior to transmission on the outgoing link, packets are assigned a time-stamp and placed into a priority queue in order of ascending time-stamps so that the packet with the smallest time-stamp is placed at the head of the queue. The time-stamp assigned to a particular packet is calculated as the estimated time at which the last bit of the packet is transmitted in an ideal system, using a global variable called the system potential which tracks the progress of work in the scheduling system. The system potential is recalibrated periodically to avoid any long-term unfairness in service offered to the sessions sharing the outgoing link." This is clearly patentably distinct from Applicant's invention under 37 CFR 1.111(b) and allowable.

In fact, the Abstract of Dulin states "The invention includes an apparatus and a method for transmitting sub-protocol data units from a plurality of base transceiver stations to a subscriber unit. The method includes estimating time delays required for transferring the sub-protocol data units between a scheduler unit and each of the base transceiver stations. The method further includes the scheduler unit generating a schedule of time slots and frequency blocks in which the sub-protocol data units are to be transmitted from the base transceiver stations to the subscriber unit. The time delays are used to generate the schedule. The time delays can be used to generate a look ahead schedule that compensates for the timing delays of the sub-protocol data units from the scheduler unit to the base transceiver stations. The sub-protocol data units are wirelessly transmitted from the base transceiver stations to the subscriber unit according to the schedule. The time delays can be estimated by time-stamping sub-protocol data units before sub-protocol data units are transferred from the scheduler unit to the base transceiver stations, and estimating the time delays by comparing the times the sub-protocol data units are actually received by the base transceiver stations with the time-stamping." This is clearly patentably distinct from Applicant's invention under 37 CFR 1.111(b) and allowable.

Finally, the Abstract of Lahat states "A mechanism and associated protocol for performing Service Level Agreement (SLA) measurements in a communications network. The measurements obtained are used to perform various SLA parameter calculations such as delay, round trip delay, one way jitter and bandwidth related calculations. SLA measurement request and response messages are stamped with time and bandwidth counters by the client and remote ends of a connection. The resultant data is used to perform the calculation of SLA parameters." This is clearly patentably distinct from Applicant's invention under 37 CFR 1.111(b) and allowable.

As such, Applicant believes that the independent claims, as well as the claims that depend on them are in condition for allowance. Should the Examiner have any further comments or suggestions, it is respectfully requested that the Examiner contact the undersigned to expeditiously resolve any outstanding issues.

Respectfully submitted,

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